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Horticulture Department Series 446

December 1977

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CHARACTERISTICS OF SELECTED POTATO CULTIVARS
IN OHIO

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CHARACTERISTICS OF SELECTED POTATO CULTIVARS IN OHIO

A. R. Mosley

Selection of the proper variety or cultivar (cultivated variety) is essential for success with any vegetable crop. This is particularly true for potatoes. Potato varieties differ widely in pest resistance, yield, general appearance and internal tuber characteristics relating to solids content, color of potato chips and suitability for prolonged storage. Season of maturity may also be an important consideration for selecting a given variety.

Performance of a variety often depends on the area of production, soil type and cultural methods. Katahdin is highly adaptable, performing moderately well across a broad range of environmental and cultural conditions. Others, however, are less adaptable. Kennebec, for instance, generally performs poorly on muck or sand. Some varieties such as Shurchip require an even, bountiful water supply while others do not. For these and other reasons, commercial growers should first test any given variety on their own farm before planting a substantial acreage to it.

Potatoes are available in different tuber shapes and skin colors. Varieties grown most commonly in Ohio are classed as round-whites. That is, tubers are generally round in shape and white-skinned. Round-reds are grown to some extent in home gardens but not commercially in Ohio. Russet-skinned potatoes likewise are not grown widely in Ohio but doubtless will be in the future. The russet skin, as typified by the "Idaho Baker", is thick, netted or scaly and more resistant to mechanical damage during harvest and handling than either reds or whites. The degree of russetting increases with maturity. All three skin types are available in both long and round tuber shapes.

Skin color is not always indicative of cooking, baking or frying quality. Many russet potatoes, however, tend to be "mealy" and have a slightly higher starch content than whites or reds. They are generally considered to be good bakers (there are many exceptions). Russets often store better for prolonged periods than white or red types since mechanical damage is less and tubers are less subject to storage rots. Red potatoes are usually least durable in storage. Cooking quality is quite similar between red and white varieties but white varieties are more desirable for chipping than either reds or russets.

Ohio's potato acreage is relatively small amounting to only 15,000 acres or about one percent of the nation's output. The industry is very diverse from marketing and usage standpoints, however. About half of the Ohio crop is utilized for potato chips, the remainder for fresh market or tablestock. Further, a small but important percentage of Ohio potatoes are also grown in home gardens or small plots of 1 to 5 acres. About one-third of the Ohio crop is harvested for late summer marketing (July and August) and two-thirds for fall harvest (September 1 to October 15). Each of these various segments have unique varietal requirements.

The following descriptions are general in nature and are intended to serve only as guidelines. Entries are arranged by approximate order of commercial acreage in Ohio. Additional information on newly-released varieties and specific qualities of others (including yield data) is available from county extension agents or the Department of Horticulture at either the Ohio Agricultural Research and Development Center or The Ohio State University.

EARLY-MATURING CULTIVARS

Superior--Superior was released by Wisconsin in 1961. It is now the standard early variety in Ohio. It is moderately resistant to common scab and is widely grown on muck soils for this reason. It is slightly susceptible to virus X, Fusarium wilt and late blight and appears to be extremely susceptible to the "early-dying" disorder. Superior normally produces lower yields than the mid-season variety Katahdin. Tubers are oval to oblong, generally smooth in shape and uniform in size, with light, flaky, russet skins. Off-shapes can be troublesome when tubers are harvested late. Tubers set deep on short rhizomes and do not green readily; skins toughen at an early age. Superior is a multi-purpose early variety which chips and cooks moderately well. It is highly resistant to ozone damage.

Tops: Medium size. Erect to spreading. Leaflets relatively small.
Flowers: Lavender

Haig--Haig was released by Nebraska in 1957. This early white variety is not widely grown in Ohio. Tubers are generally round but can be oblong. Apical eyes are deep and skins are thick and scaly or slightly russeted at maturity. Tubers tend to be small calling for wider seedpiece spacing than standard Ohio varieties. Haig has not yielded well in Ohio tests but is used by some growers for earliness and scab resistance. It appears to be fairly well adapted to muck soils. Haig chips from the field but will not recondition from storage. Reports from other states indicate that Haig responds well to higher rates of nitrogen.

Tops: Small to medium and erect to slightly spreading.
Flower: Lavender

Irish Cobbler--Irish Cobbler is among the very earliest varieties. It is no longer grown commercially in Ohio to any large extent due primarily to a tendency toward excessive off-shapes. Cobbler is fairly popular among home gardeners and roadside marketers, however. This variety was probably first grown around 1846 making it one of the oldest varieties still available commercially. Some reports indicate it may have been grown first in Massachusetts by an Irish shoemaker or cobbler (hence the name). Other authorities argue equally well that it was first grown by the same Irish cobbler in New Jersey from tubers mixed with Early Rose seed.

Tubers of Cobbler are round with white, smooth skin and eyes ranging from shallow to deep. Yields are low compared to mid-season varieties such as Katahdin. Tubers are generally too rough in shape to sell well in commercial channels in Ohio. Cobbler has excellent quality for most tablestock uses.

Tops: Medium size, erect to spreading. Stems are prominently angled and are generally reddish purple.
Flowers: Lilac

Norland--The early-red variety, Norland, was released by North Dakota in 1957. It is extremely susceptible to ozone injury in Ohio but normally produces an acceptable yield for an early-maturing variety. Tubers are smooth and shallow-eyed and grade-out is good. Norland is moderately resistant to common scab but susceptible to most potato viruses and to late blight. Silver scurf is also common on tubers. Tubers are fair for baking and excellent for boiling or frying. Norland is not grown extensively in Ohio but may be a good choice for an early home-garden variety.

Tops: Medium large, spreading.
Flowers: Purple, buds green.

MEDIUM-EARLY

Norchip--Norchip was released by North Dakota in 1968. It is susceptible to late blight, Verticillium wilt and virus X but is moderately resistant to common scab. Yields have been only average in Ohio. Tubers are smooth-skinned and creamy white with shallow to medium deep eyes and deep bud ends. On heavy or poorly drained soils, Norchip is subject to growth cracks and off-shapes, with shouldering at the tuber ends. Under these conditions, it is completely unsatisfactory for tablestock. Tuber shape is generally round to oblong. Tubers often run small since it tends to set heavily. Wider seedpiece spacing and the use of cut seed may be beneficial in increasing tuber size. Norchip is normally more dependable than Kennebec for chipping, especially from storage, and has higher solids.

Tops: Medium to large, upright. Subject to heat and drought stress.
Flowers: White, buds green.

Shurchip--Shurchip is a round russet which was released by Nebraska in 1969. It has yielded well in Ohio tests, generally ranking near the top. It is moderately resistant to common scab and tolerant to Fusarium and Verticillium wilts, but is moderately susceptible to damage by ozone. Tubers are similar in size to Katahdin and are round with shallow eyes. Although it was released primarily for chipping purposes, Shurchip has become a popular tablestock variety in some areas of Ohio, particularly where irrigation is used. It is somewhat slower-cooking than Katahdin and may be firmer when baked. Specific gravity is generally slightly better than Katahdin. It is not a dependable chipping variety in comparison to Norchip or Kennebec.

Tops: Medium size and spreading. Dark green.
Flowers: Lavender with white tips.

Monona--Monona is a medium-early chipping variety which was released by Frito-Lay in 1964. It is resistant to viruses Y and A but is susceptible to most other diseases including blackleg. Monona reconditions for chipping from cold storage extremely well, but is low in specific gravity compared to Norchip. Tubers are oblong with medium-deep eyes and light to creamy buff skins. Low yields have been the single most limiting factor with Monona. Low yields in Ohio have often been associated with poor stands and light tuber set. The use of healthy, sound seed, free of blackleg is essential for this variety. Monona should be spaced close (6-7 inches) in the row for best yields and seed should be handled extremely carefully to insure good stands.

Tops: Medium size, spreading.
Flowers: White, large.

MIDSEASON-TO-LATE

Katahdin--Katahdin is the most widely grown variety in the east and is the standard midseason-to-late variety in Ohio. It was released by the USDA in 1935 and quickly rose to prominence. It is resistant to mild mosaic, moderately resistant to leaf-roll, and immune to net necrosis and potato wart. It is widely adapted, yielding satisfactorily under a wide range of conditions. Tubers are elliptical to round with shallow eyes and smooth, white skin. Katahdin is widely used as an all-purpose potato and is a leading variety for potato salads. It usually chips and fries satisfactorily from the field but is not the best choice for chipping from storage since either Norchip, Monona or Kennebec are more dependable. Katahdin probably resists storage losses better than any of these, however, and is, therefore, a good choice for tablestocking from storage.

Tops: Medium to large.
Flowers: Lilac with white tips.

Kennebec--Kennebec generally matures a few days later than Katahdin. It was released by the USDA in 1948. It is somewhat resistant to some races of late blight, mild mosaic, net necrosis and ozone injury, but is moderately susceptible to Verticillium wilt. It is extremely subject to scab on muck or sand and grades out poorly on these soils. U.S. No. 1 yields are generally good despite low grades due to a tendency toward greening, field rots and off-shapes when harvested late. It is subject to leak, pink-eye and other rots in storage and for these reasons is relatively difficult to store for long periods. Tubers of Kennebec are white and elliptical to oblong. It is an excellent general-purpose potato suitable for boiling, baking, frying and processing into chips. Kennebec is a very important chipping variety in Ohio despite low solids. It is a good choice for chipping from storage provided rots are controlled.

Tops: Large and upright.
Flowers: White.

Sebago--Sebago was released by the USDA in 1938. It is grown primarily as a late chipping variety in Ohio; acreage has been relatively small in recent years. Yields are average to good. Tubers are large, elliptical to round, medium thick and have smooth ivory yellow skins. Sebago is resistant to mild mosaic and net necrosis and moderately resistant to late blight. It appears to be quite susceptible to black-leg. Cooking quality is variable but generally good when tubers are mature.

Tops: Large, erect to spreading.
Flowers: Lilac, tips slightly lighter in color.

Wauseon--Wauseon was released by the USDA and New York in 1967. It is not widely grown in Ohio but a stable acreage is maintained for soup processing in northwestern Ohio. Tubers are round to oblong, slightly flattened and of average smoothness. Chipping quality is mediocre and less than Kennebec. Wauseon is resistant to common scab, common races of late blight, latent and mild mosaic, net necrosis caused by current leafroll infection and the golden nematode. Tubers generally store satisfactorily.

Tops: Medium to large, upright.
Flowers: Light violet. Buds reddish purple.

Abnaki--Abnaki was released by the USDA in 1970. It has yielded better than Katahdin and Kennebec in Ohio tests but has been very susceptible to hollow heart, especially in tubers over 3 inches in diameter. Abnaki has also been subject to late blight tuber rots in Ohio. Tubers are generally round but slightly flattened, smooth, shallow-eyed and more resistant to skinning than Katahdin and Kennebec. Specific gravity and cooking quality are similar to Katahdin. Abnaki does not chip dependably from storage in Ohio. It is said to be resistant to Verticillium wilt and leafroll and more resistant to common scab than Katahdin. Reports also indicate a degree of resistance to mild mosaic and tuber symptoms of net necrosis following leafroll infection.

Tops: Large, upright. Leaflets are large and are arranged in plate-like horizontal layers.
Flowers: White and numerous.

Atlantic--Atlantic was released by the USDA in 1976 in cooperation with several states. It has high yielding potential in Ohio. Tubers are round, smooth in shape and attractive with thick, russeted skins. Specific gravity is generally high and chipping quality is said to be good. Extensive chipping tests have not yet been performed in Ohio, however. Large tubers are slightly susceptible to hollow-heart and decidedly susceptible to what appears to be heat necrosis, particularly in southern Ohio. Atlantic is immune to virus X and net necrosis following leafroll infection. It is moderately resistant to scab and race 0 of late blight, and is resistant to race A of the golden nematode and to hopperburn.

Tops: Large, upright.

Flowers: Pale lilac.

Red Pontiac--Red Pontiac is a clonal mutation of Pontiac. It was first released in 1949 by North Dakota-Minnesota. Red Pontiac yields extremely well, much higher than either Katahdin or Kennebec. Tubers are often large, deep-eyed and rough in shape when harvested late. It is not grown commercially to any extent in Ohio but is popular among home gardeners and roadside marketers who have an outlet for red potatoes.

Tops: Large, spreading.

Flowers: Reddish purple with tips nearly white.

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